ABSTRACT OF THE DISCLOSURE

A membrane fuel cell delimited by bipolar plates comprising a cathodic compartment and an anodic compartment, said cathodic compartment comprising means for feeding air from the bottom to the top, said anodic compartment comprising means for feeding a hydrogen-containing fuel from the top to the bottom, at least one of said cathodic and anodic compartment comprising a flow distributor consisting of a porous material and a method of operating cell said.